IJIR: Your Sexual Medicine Journal
https://doi.org/10.1038/s41443-019-0133-z

ARTICLE

Hard flaccid syndrome: initial report of four cases

Murat Gul[1] · Maxwell Towe[2] · Faysal A. Yafi[2] · Ege Can Serefoglu[3]

Received: 27 December 2018 / Revised: 10 February 2019 / Accepted: 25 February 2019

Abstract

Hard flaccid (HF) is a group of symptoms that significantly affects a man's sexual and social life. As this syndrome has only been reported in several patient forums, exact prevalence of this rare condition is unknown. Currently, no scientific literature exists of the syndrome. We, hereby, aimed to present four cases suffering from HF and compare the common signs and symptoms with those reported in patient forums. We searched internet forums, chat groups, and private support groups to collect information about symptoms of HF patients. We have identified several complaints regarding penis, erections, libido, urination, and ejaculation. Moreover, we have also collected common findings of laboratory and imaging tests that are used in the workup of HF. The majority of the HF patients is in their 20s–30s. Patients usually seek medical advice due to the following complaints: penile sensory changes (numb or cold), semi-rigid penis at the flaccid state, decreased frequency of morning and/or nocturnal erections, loss in erectile rigidity, difficulty in achieving and maintaining their erections, need for excessive physical or visual stimulation to become erect, and pain on ejaculation and/or urination. Psychological symptoms are usually present ranging from mild anxiety to severe depression. Moreover, laboratory and imaging tests are often unremarkable. Our cases included men between the ages of 22 and 34 years of age and they all reported the onset of their symptoms after a trauma during sexual intercourse or tough masturbation. Compared with reports in patient forums, many of these symptoms (except the urination problems) were observed in our patients and the imaging/laboratory tests were inconclusive. The patients were provided daily/on-demand phosphodiesterase-5 inhibitors, which were not effective. Currently, HF syndrome has not been universally recognized by urologists and a number of patients seem to suffer from this disorder. In order to raise awareness of this clinical phenomenon, HF must be recognized by professional organizations and a better understanding of the disorder must be established.

Introduction

Male sexual dysfunctions (MSDs) may lead to considerable anguish both for men and their partners. Although premature ejaculation and erectile dysfunction are considered to be the most common forms of MSDs [1], there are many other clinical entities that cause significant distress, frustration, and interpersonal difficulties.

In recent years, there has been an increased interest about a phenomenon referred to as "hard flaccid" (HF) syndrome on the internet. Many forums, web pages, and videos have been uploaded, describing the signs and symptoms of this sexual problem [2]. In this report we present the clinical findings and management of four cases whose complaints match with those who suffer from HF. To our knowledge, no HF cases have been described previously in the scientific literature.

Material and methods

We have searched forums, chat groups, and private support groups to collect information about symptoms of HF patients. We have identified several complaints regarding penis, erections, libido, urination, and ejaculation. Moreover, we have also collected common findings of laboratory and imaging tests that are used in the workup of HF. All patients gave their written informed consent.

Case 1

A 34-year-old male patient presented to the urology outpatient clinic with 3 months history of decreased libido and erectile dysfunction. He also described that his penis was more rigid

✉ Ege Can Serefoglu
egecanserefoglu@hotmail.com

[1] Department of Urology, Aksaray University School of Medicine, Aksaray, Turkey

[2] Department of Urology, University of California, Irvine, CA, USA

[3] Department of Urology, Bahceci Health Group, Istanbul, Turkey

Published online: 19 March 2019

than usual during the flaccid state and he lost the sensitivity of the glans penis. He stated that his penis (especially glans) was colder than before. Other accompanying symptoms were difficulty in maintaining erections (70% compared with before) and painful ejaculations. The onset of his symptoms was just after a rough masturbation, while he used marijuana. His detailed physical examination was uneventful, except hardness at the base of the penis on the right-bottom side. He had already visited several urologists and all the imaging studies (penile Doppler ultrasound and pelvic magnetic resonance imaging (MRI)) did not reveal any pathological finding. Similarly, his laboratory tests (fasting blood glucose, lipid profile, follicle stimulating hormone (FSH), luteinizing hormone (LH), testosterone) were normal. He was prescribed fluoxetine treatment due to the severe anxiety, which initiated after the onset of these sexual symptoms.

The patient was instructed to stop fluoxetine treatment and daily tadalafil 5 mg (Eli Lilly and Company, Indianapolis, IN, USA) was prescribed. The patient did not report any improvement at the end of 2 months so he stopped the treatment.

Case 2

A 26-year-old male patient was admitted to the urology outpatient clinic with erectile complaints, which started after a trauma during sexual intercourse. The patient felt a sudden pain at the radix of his penis when his female partner was on top, which was followed by the immediate loss of erection. He did not have any bruises and his penile ultrasound was completely normal. The patient started to lose the hardness of his erections gradually and suffered from erectile dysfunction, 3 months after the trauma. His glans was softer and colder than before, which was associated with a significant anxiety. The fasting blood glucose, lipid profile, FSH, LH, and testosterone levels were within the normal range. The patient underwent pelvic MRI, which did not reveal any pathological findings.

The patient was prescribed daily tadalafil 5 mg (Eli Lilly and Company, Indianapolis, IN, USA) and he observed moderate improvement in his erections at the first month follow-up. The patient underwent low-intensity shock wave therapy (ED1000, Medispec, Gaithersburg, MD, USA) for six sessions, while he was under the tadalafil 5 mg/day, which significantly improved his penile hardness and the patient discharged uneventfully. However, 6 months later, the patient was readmitted with similar complaints and low-intensity shock wave therapy was repeated upon the request of the patient.

Case 3

A 31-year-old male with a history of Peyronie's disease (PD) visited our clinic with the complaints of erectile dysfunction that occurred after an episode of rough masturbation. Approximately 3.5 months before this visit, the patient reported jelqing along the established curvature of his PD but stopped due to increasing discomfort. Since then, he noticed a decrease in the rigidity of his erections and the strength of his orgasms would fluctuate between strong and weak. He also had an associated weak urinary stream. A physical exam by a previously seen urologist was largely unremarkable but notable for tenderness in the proximal penile crura and a dorsal penile plaque, likely from pre-existing PD. Penile Duplex showed normal flow with scarring due to PD and was negative for any other signs of pathology. Testosterone, estradiol, and prolactin levels were all within normal range.

The patient was started on tadalafil 5 mg (Eli Lilly and Company, Indianapolis, IN, USA) for 2 weeks by a previous urologist, with some reported benefit, and was able to achieve suboptimal erections with 50 mg of sildenafil (Pfizer, Inc., New York, NY, USA). While on treatment, the patient reported cycles of hardening on the dorsum of his penis that would last for about a week, during which time he would be unable to get an erection. This would alternate with periods where he would occasionally experience strong and persistent erections.

Case 4

A 22-year-old male presented to the clinic for follow-up of erectile dysfunction, low libido, and an "odd" sensation in his penis. The patient reported the onset of these symptoms after an episode of jelqing and notably aggressive masturbation. Two days following the episode, he visited the emergency department stating that his penis felt "weird" like part of it was numb or stinging. A physical exam at that time was unremarkable. Since then, he also noticed a decrease in the frequency of erections (occurring only 2 times/week) and a decrease in rigidity during erections. He also reported a decrease in his sex drive and felt like his testosterone levels were low. Laboratory tests revealed an initially elevated prolactin, but a repeat value was within normal range. All other hormonal assays (testosterone, estradiol, prolactin, FSH, and LH) were normal and a penile ultrasound did not show any pathological features.

At follow-up, he reports some improvement in his in erectile symptoms, but still endorses difficulty with maintaining erections. He was subsequently started on sildenafil 50 mg (Pfizer, Inc., New York, NY, USA) but did not experience any further improvement.

Discussion

HF is a cluster of symptoms that significantly affects a man's sexual and social life. Currently, this syndrome has

been defined and discussed in patient forums or private chat groups on the internet solely and there is no evidence-based definition of this condition yet. The disease derives its name from the morphologic (rigid) shape of the penis during the flaccid state; however, all patients do not describe such a symptom. As there is no scientific research on this rare clinical entity, we know very little about whether it is a true medical disorder or a psychological issue.

According to our search results on the Internet, the most common symptoms were constant penile semi-hardness in the flaccid state and numb (rubbery) penile sensation. Patients have difficulty in achieving and maintaining their erections and most of them require additional tactile or visual stimuli to become erect. Moreover, these erectile difficulties seem to change with the alterations in body position as with two of our cases, who reported that their erections are worse when they are standing. Common symptoms of HF can be seen in Table 1.

Although the exact mechanisms resulting in HF are not clear, traumatic events such as rough masturbation or jelqing may be responsible for the onset of the symptoms. The location and the extension of this traumatic injury may affect the pudendal nerve and artery, which may deteriorate pelvic floor muscle and erectile functions. In addition, HF patients commonly report symptoms similar to chronic pelvic pain syndrome [3] or pelvic floor tightness [2, 4]. All these symptoms may result in psychological problems, which further affect the libido, erectile function, and general well-being of the patients. Similar to our cases, patients in the internet forums report that imaging modalities including penile Doppler ultrasound and MRI were inconclusive.

Considering those patient reports, we hypothesize that these penile sensation changes and erection complaints may be the result of a (minor) trauma to the nerves passing adjacent to the corpus spongiosum in radix penis, resulting in inflammation in these nerves. Such a neuropathy may be responsible in sensation changes (coldness, numbness in the glans), erectile problems (especially softening in the glans penis), and painful erections/ejaculations [5, 6] (Fig. 1). We also believe that urinary symptoms of the HF patients may be explained by pelvic floor muscle and external urethral sphincter dysfunction due to the pudendal nerve injury induced by traumatic sexual event [7].

Therefore, a thorough sexual history must be taken from HF patients, to identify the sexual trauma that may trigger the HF symptoms. A basic psychological assessment may be required to understand how HF symptoms are affecting the patients' quality of life. Erectile functions may be evaluated with questionnaires, whereas examination of the penis along with pelvic floor may be necessary for excluding other urogenital diseases.

Naturally, the treatment of HF is unclear. Some of the patients in the internet forums reported beneficial effects of pelvic muscle relaxation exercises, phosphodiesterase type 5 inhibitors, penile massages, and some other techniques. However, most of the patients state that none of the aforementioned treatments worked and they keep on seeking a treatment. None of the HF patients in these forums report any experience with low-intensity shock-wave therapy, which may be administered to patients who failed previous therapies. Although we could not identify any reports about

Table 1 HF symptoms

HF reports from Internet	Case 1	Case 2	Case 3	Case 4
Penis				
Feels constantly hard but in flaccid state	✓	✓	✓	X
During masturbation, slight ache in the base of the penis	✓	✓	✓	✓
Noticable superficial veins	✓	✓	X	X
Bubble around the glans (very rare)	X	✓	X	X
Scar tissue (very rare)	✓	X	X	X
Erections				
No morning erections	✓	✓	✓	✓
Often feel hollow or empty but also rigid than usual	✓	✓	✓	✓
Glans is often soft, sometimes cold or numb	✓	✓	X	✓
Difficult to maintain erections	✓	✓	X	✓
Best in lying on back position, worst when stood upright	✓	X*	✓	X
Libido				
Generally low	✓	✓	X	✓
Urination				
Painful urination	X	X	X	X
Weak stream (rare)	X	X	✓	X
Ejaculation				
Painful ejaculation (or slightly painful)	✓	✓	✓	✓
Penile and /or perineal (occasionally)	X	X	X	X
Tests				
Normal physical examinations, sometimes mild curvatures	✓	✓	✓	✓
Generally normal hormone levels and other blood tests*	✓	✓	✓	✓
Normal penile doppler ultrasonography (no peyronie, no fibrosis)	✓	✓	X***	✓
Normal MRI and other imaging modalities	✓	✓	✓	✓

*This patient experienced the opposite

**Sometimes hormone levels have been reported to be lower than normal limits due to extreme stress

***This patient was in the stable phase of Peyronie's disease

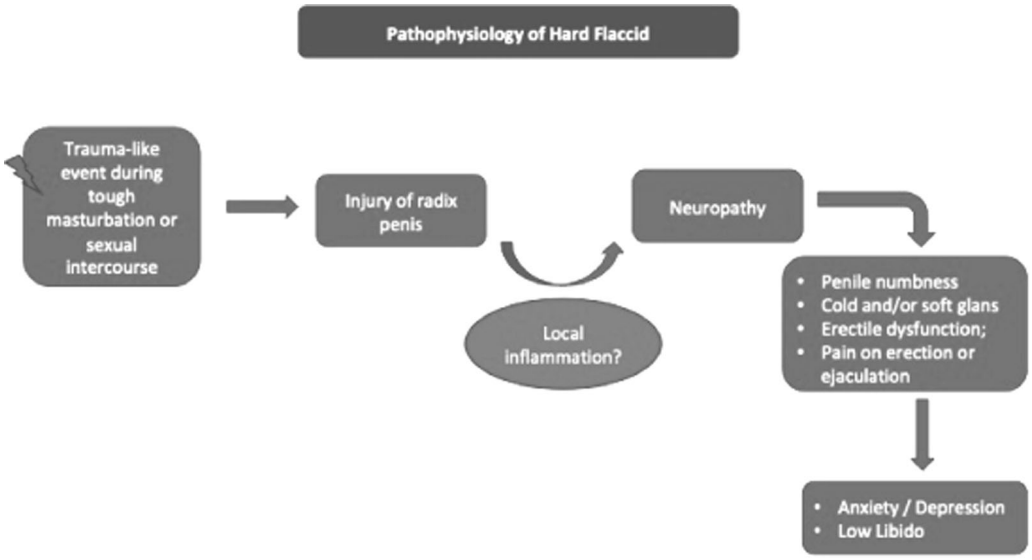

Fig. 1 Possible pathophysiology of HF

topical alprostadil creams, we believe that they may be offered to HF patients whose primary complaint is the softness in penile glans [8, 9].

Conclusion

Although HF has not been recognized by the sexual medicine community yet, some patients seem to suffer from this sexual disorder. Therefore, the professional medical organizations must initiate study groups to understand the dynamics of this rare clinical phenomenon and actual pathophysiological mechanisms of HF must be elucidated.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Publisher's note: Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

1. Laumann EO, Nicolosi A, Glasser DB, Paik A, Gingell C, Moreira E, et al. Sexual problems among women and men aged 40-80 y: prevalence and correlates identified in the Global Study of Sexual Attitudes and Behaviors. Int J Impot Res. 2005;17:39–57.
2. Larger and overextended Flaccid penis after masturbate, HELP! https://www.pegym.com/forums/penile-anomalies-injuries/74414-larger-overextended-flaccid-penis-after-masturbate-help.html (accessed 20 November 2018).
3. Nickel JC, Freedland SJ, Castro-Santamaria R, Moreira DM. Chronic prostate inflammation predicts symptom progression in patients with chronic prostatitis/chronic pelvic pain. J Urol. 2017;198:122–8.
4. Hughes K, Parnham A, Lucky M. Hard flaccid syndrome. Urology News. 2018. https://www.urologynews.uk.com https://www.urologynews.uk.com/synopsis-uro/hard-flaccid-syndrome/ (accessed 20 November 2018).
5. Sommer F, König D, Graft C, Schwarzer U, Bertram C, Klotz T, et al. Impotence and genital numbness in cyclists. Int J Sports Med. 2001;22:410–3.
6. Oberpenning F, Roth S, Leusmann DB, van Ahlen H, Hertle L. The Alcock syndrome: temporary penile insensitivity due to compression of the pudendal nerve within the Alcock canal. J Urol. 1994;151:423–5.
7. Awad MA, Gaither TW, Murphy GP, Chumnarnsongkhroh T, Metzler I, Sanford T, et al. Cycling, and male sexual and urinary function: results from a large, multinational, cross-sectional study. J Urol. 2018;199:798–804.
8. Cuzin B. Alprostadil cream in the treatment of erectile dysfunction: clinical evidence and experience. Ther Adv Urol. 2016;8:249–56.
9. Cai T, Palumbo F, Liguori G, Mondaini N, Scroppo FI, Di Trapani D, et al. The intra-meatal application of alprostadil cream (Vitaros®) improves drug efficacy and patient's satisfaction: results from a randomized, two-administration route, cross-over clinical trial. Int J Impot Res. 2019;31,119–1258. https://doi.org/10.1038/s41443-018-0087-6.